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EXAMINER

CHUNG, JASON J

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/882,105

Applicant(s)

CONNELLY, JAY H.

Examiner

Jason J. Chung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments, see pages 4-5, filed 11/10/03, with respect to the rejection(s) of claim(s) 1-56 under section 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. The examiner has missed the limitation in consideration for an upcoming broadcast. As stated in page 4-page 5, line 2 of the applicant's response. However, upon further consideration, a new ground(s) of rejection is made in view of Girard.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 20, 26, 27, 35, 36, 44, 45, 53, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (WO 01/15451 A1) in view of Rao (US Patent # 6,594,826) in further view of Girard (US Patent # 5,751,282).

Regarding claim 1, Wu discloses a list and/or grid (meta data) of future programs could be shown to the user (page 9, lines 2-5). Wu discloses a list and/or grid (meta data) of available segments is presented (page 10, lines 7-11); Wu discloses the broadcast segments have time and identifiers associated with it that causes the set top box to record the program segment when it is scheduled (page 10, line 29-page 11, line 6), which meets the limitation on meta-data to clients that include the description of pieces of content.

Wu discloses the user makes selection for the desired stream (page 10, lines 18-28), which meets the limitation on receiving individual sets of client demand feedback from clients comprising data indicating a client interest level in pieces of content.

Wu discloses the users make demands for programs (page 12, lines 7-18). Wu discloses the requests are ranked based on demand and the ranking shows the most popular show first (page 12, lines 19-32), which meets the limitation on maintaining a broadcast schedule queue comprising an ordered list of pieces of content that indicates interest derived from client feedback.

Wu discloses the shortest segment finishes before the longer segments (page 13, lines 5-8). Wu discloses the lack of bandwidth would send a message to the set top box the request could not be accommodated (page 13, lines 11-13). Wu discloses that the segments are scheduled by bandwidth requirements and accommodate shorter requests before longer requests (page 13, lines 29-31), which meets the limitation on selecting a batch of content comprising one or more pieces of content from the top portion of the broadcast schedule queue to be broadcast during the next available bandwidth.

Wu fails to disclose the meta-data is broadcasted. Rao discloses the digital broadcast has program data and electronic program guide data (column 9, lines 47-65, abstract); Rao discloses the program guide is used by the user to select programs (column 16, lines 3-16), which meets the limitation on broadcasting meta-data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu to have the meta-data broadcast as taught by Rao in order to save client system resources so the system will not have to scan the incoming programs and generate a program guide.

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Neither Wu nor Rao disclose in consideration for upcoming broadcasts. Girard discloses the viewer can review past programs (column 2, lines 5-27). Girard discloses the viewer can select a past program (column 2, lines 28-40). Girard discloses the viewer can use the electronic programming guide to select video on demand of past programs (column 1, lines 6-12). Girard discloses the electronic programming guide (meta data) can be used to order video on demand (column 2, lines 41-44), which meets the limitation on the meta data including descriptions of a plurality of pieces of content that are in consideration for upcoming broadcasts by a broadcast operations center. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao to have the electronic program guides have past programs on demand as taught by Girard in order to provide users a list of programming to select from in case if the user missed a previous program.

Regarding claim 2, Wu discloses after the highest ranking segments are shown first and they finish, the next highest ranking segments are shown and so on (page 13, lines 1-4), which meets the limitation on a new batch of content is broadcast during sequential broadcast schedule windows.

Regarding claim 3, Wu discloses after the highest-ranking segments are shown first and they finish, the next highest-ranking segments are shown and so on (page 13, lines 1-4). Wu discloses the requests are held for a period of time then the requested are ranked based on demand; after the period of time for holding and the deployment of the streams new requests will be received (page 12, lines 12-32), which meets the limitation on the piece of content cannot be selected again for a subsequent broadcast until the new requests corresponding to the content are received.

Regarding claim 20, Wu discloses the schedule is provided to the set top box for recording purposes (page 13, lines 9-10), which meets the limitation on broadcasting a broadcast schedule prior to broadcasting the batch of content that is selected to be broadcast during the next broadcast schedule window.

Regarding claim 26, the limitations in claim 26 have been met in claim 1 rejection. Wu discloses the additional limitation of a computer 120 (processor with circuitry), a data link 118 (communications interface coupled to the processor to receive data from clients, page 5, lines 23-26), and an audio/video source 124 (storage device coupled to processor) (figure 1).

Regarding claim 27, the limitations in claim 27 have been met in claims 2, 3 rejections. Wu discloses after the highest-ranking segments are shown first and they finish, the next highest-ranking segments are shown and so on (page 13, lines 1-4). Wu discloses the requests are held for a period of time then the requested are ranked based on demand; after the period of time for holding and the deployment of the streams new requests will be received (page 12, lines 12-32), which meets the limitation on resetting the piece of content cannot be selected again for a subsequent broadcast until the new requests corresponding to the content are received.

Regarding claim 35, the limitations in claim 35 have been met in claim 1 rejection. Wu discloses the programs on the computer 122 for scheduling the on demand stream (page 15, lines 2-13), which meets the additional limitation of a machine readable medium.

Regarding claim 36, the limitations in claim 36 have been met in claim 27 rejection.

Regarding claim 44, the limitations in claim 44 have been met in claim 1 rejection. Wu discloses the stream source 112 is a headend (page 4, lines 20-24). Wu discloses a stream source 112 (broadcast server), an audio/video source 124 (database server linked to broadcast server)

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(figure 1). The set top box (one of plurality of clients) are linked to the database server via data channel 118 (second communications link) (figure 1). The stream source broadcasts streams to the set top box (one of plurality of clients) via a first communications link (page 44, lines 7-10, figure 1)

Regarding claim 45, the limitations in claim 45 have been met in claim 27 rejection.

Regarding claim 53, Wu discloses the stream source could be a satellite transmission system (page 4, lines 22-24), which meets the limitation on a first communications link. Wu discloses the data channel can be a coax cable, telephone return, or any other type of connection (page 4, lines 7-16), which meets the limitation on a telecommunications network being a second communications link.

Regarding claim 55, Wu discloses the stream source could be a satellite transmission system (page 4, lines 22-24), which meets the limitation on a first communications link. Wu discloses the data channel can be a coax cable, telephone return, or any other type of connection (page 4, lines 7-16). Wu discloses the data channel 118 that connects to the computer can use a cable modem or telephone connection (page 6, lines 23-32), which meets the limitation on a computer network being a second communications link.

2. Claims 4, 28, 37, 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Rao in further view of Girard in further view of Katayama (US Patent # 6,349,321).

Regarding claim 4, Wu discloses the requests are held for varying periods until a time and the requests are ranked. Wu fails to disclose ranking and recalculating after more requests are received. Katayama discloses a higher priority task is received and the scheduler calculates the time for the tasks and could interrupt the preceding process with the new process (column 5,

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line 48-column 6, line 27), which meets the limitation on recalculating upon receiving feedback data. Katayama discloses the CPU receives a plurality of asynchronous tasks (column 6, lines 28-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in view of Girard to recalculate upon receiving new requests as taught by Katayama in order to process newly requested higher priority requests first.

Regarding claim 28, the limitations in claim 28 have been met in claim 4 rejection.

Regarding claim 37, the limitations in claim 37 have been met in claim 4 rejection.

Regarding claim 46, the limitations in claim 46 have been met in claim 28 rejection.

3. Claims 5, 6, 10, 12, 13, 17, 21-25, 31, 32, 40, 41, 49, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Rao in further view of Girard in further view of Hendricks (US Patent # 5,600,573).

Regarding claim 5, Wu discloses the users may pay to move their requests up in the rankings (page 13, line 31-page 14, line 2). Wu fails to disclose the same embodiment.

Hendricks discloses the market research component receives viewer requests for programs, program ratings, and the like to assist scheduler in formulating the program lineup based on viewer requests for programs (column 10, lines 42-52), which meets the limitation on adjusting the schedule in consideration of business objectives. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard to assist the scheduler in making the lineup using a market research component as taught by Hendricks in order to determine what programs will be of interest to the viewer.

Regarding claim 6, Wu discloses ranking data for on demand streams based on the number of requests made for a segment (page 12, lines 12-31), which meets the limitation on rating data corresponding to pieces of content in the schedule and ordered based on corresponding rating values.

Neither Wu, Rao, nor Girard discloses the client feedback data **comprising** ratings data. Hendricks discloses the market research component receives and analyzes program ratings and the like to assist the scheduler to formulate a program lineup (column 10, lines 42-52); the combination of user demand and the ratings read on client demand feedback. Hendricks discloses the networks analyze the ratings for the television shows and determines an appropriate schedule or program lineup to gain market share (column 2, lines 30-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard to have the feedback comprise ratings as taught by Hendricks in order to gain market share and revenue.

Regarding claim 10, Wu discloses the paid on demand segments could be provided in favor of free on demand segments to maximize revenue but not the **further comprising** (which is the same embodiment). Hendricks discloses the viewer requests and the ratings determine the program lineup that plays the programs that will be shown to the viewer including advertisements selected (column 10, lines 42-55). Hendricks discloses the program lineup is determined to gain market share revenues (column 2, lines 30-37).

Regarding claim 12, Rao discloses the digital broadcast carries both program data and electronic program guide data (meta-data) and is delivered to the subscriber (column 9, lines 47-65), which meets the limitation on meta data broadcasted a continuous stream. Rao discloses the

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user selects a channel for viewing from the EPG and the appropriate information regarding the selected channel such as stream ID, rate, PID list, etc. (ratings data) is signaled (provided) from the subscriber unit to access the VP to enable the tuning of the filters and route the programs to the user (column 16, lines 3-16); the program guide necessitates the name of the program (attribute) and the start time (attribute value) of the program.

Regarding claim 13, Wu discloses the requests for segments are received and the requests are ranked based on demand (page 12, line 7-page 13, line 4), which meets the limitation on ranking data pertaining to relative levels of interest in at least two pieces of content and the broadcast schedule queue is determined by aggregating the rankings data.

Neither Wu, Rao, nor Girard discloses the client feedback data **comprising** ratings data. Hendricks discloses the market research component receives and analyzes program ratings and the like to assist the scheduler to formulate a program lineup (column 10, lines 42-52); the combination of user demand and the ratings read on client demand feedback. Hendricks discloses the networks analyze the ratings for the television shows and determines an appropriate schedule or program lineup to gain market share (column 2, lines 30-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard to have the feedback comprise ratings as taught by Hendricks in order to gain market share and revenue.

Regarding claim 17, Wu discloses the paid on demand segments could be provided in favor of free on demand segments to maximize revenue but not the **further comprising** (which is the same embodiment). Hendricks discloses the viewer requests and the ratings determine the program lineup that plays the programs that will be shown to the viewer including

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advertisements selected (column 10, lines 42-55). Hendricks discloses the program lineup is determined to gain market share revenues (column 2, lines 30-37).

Regarding claim 21, Wu discloses the data can be sent and received over data channel (page 5, lines 23-26), which meets the limitation on client feedback. Wu discloses the multimedia content may be transmitted with more than one stream for different regions and the set top box selects the appropriate portion of the segments (page 14, lines 15-28), which meets the limitation on client systems segmented so that each client system is a member of a segment among multiple segments.

Neither Wu, Rao, nor Girard discloses the client feedback data **includes** data identifying the segment the client system is a member of. Hendricks discloses the user demands and the ratings of the program are sent back to the CAP in the operations center 202 and the ad inserter determines what ads located locally will be inserted into the lineup (column 10, lines 39-67), which meets the limitation on client feedback data identifying the segment the client system is a member of and pieces of content are selected to be broadcast. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard to have client feedback data identify the segment the client system is a member of and select pieces of content to be broadcast for the segment as taught by Hendricks in order to tailor specific programming for different regions.

Regarding claim 22, Wu discloses the set top box has the zip code that is used to select appropriate regional broadcast (page 14, lines 23-28), which meets the limitation on segmented based on geography and each client is assigned to a geographical region.

Regarding claim 23, Wu discloses the set top box has the zip code that is used to select appropriate regional broadcast (page 14, lines 23-28).

Neither Wu, Rao, nor Girard discloses segmenting based on a network. Hendricks discloses the scheduler creates a program lineup and determines which programs will be made available to what site and viewers (column 10, lines 42-48), which meets the limitation on segmenting based on a network by which each client receives broadcast content. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard to have the clients segmented based on a network as taught by Hendricks in order to tailor the broadcasting by sending the appropriate programs to the appropriate viewer.

Regarding claims 24-25, Wu discloses many modifications and equivalent arrangements will be apparent (page 15, lines 15-18).

Neither Wu, Rao, nor Girard discloses a store and forward multistage broadcast network. Hendricks discloses the operations center 202 transmits programs to the cable headend or remote site 208, which transmits programming to the set top terminal 220 (column 9, lines 13-38). Hendricks discloses the cable headends may store program for later distribution (column 9, lines 39-48), which meets the limitation on broadcasting the batch of content using a multi-stage broadcast network that uses a store and forward mechanism. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao to in further view of Girard have a multistage store and forward broadcast network as taught by Hendricks in order to maintain data integrity throughout each branch of the network.

Regarding claim 29, the limitations in claim 29 have been met in claim 6 rejection.

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Regarding claim 31, the limitations in claim 31 have been met in claim 12 rejection.

Regarding claim 32, the limitations in claim 32 have been met in claim 13 rejection.

Regarding claim 38, the limitations in claim 38 have been met in claim 6 rejection.

Regarding claim 40, the limitations in claim 40 have been met in claim 12 rejection.

Regarding claim 41, the limitations in claim 41 have been met in claim 13 rejection.

Regarding claim 47, the limitations in claim 47 have been met in claim 6 rejection.

Regarding claim 49, the limitations in claim 49 have been met in claim 12 rejection.

Regarding claim 50, the limitations in claim 50 have been met in claim 13 rejection.

4. Claims 8, 9, 11, 15, 16, 18, 19, 30, 33, 34, 39, 42, 43, 48, 51, 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Rao in further view of Girard in further view of Hendricks in further view of Graves (US Patent # 5,410,344).

Regarding claim 8, as disclosed in claim 1 rejection, Wu discloses the programs in the scheduled are scheduled based on the rankings of demand from the user.

Neither Wu, Rao, Girard, nor Hendricks discloses the portion of the ratings comprising rating inputs by users of the client system indicating a level of desirability.

Graves discloses the user uses a remote control to indicate the desirability of a program (column 6, line 53-column 7, line 4; figure 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard in further view of Hendricks to have the user indicate the desirability of content as taught by Graves so the user is can dictate the desirability of the program.

Regarding claim 9, as disclosed in claim 1 rejection, Wu discloses the programs in the scheduled are scheduled based on the rankings of demand from the user.

Neither Wu, Rao, Girard, nor Hendricks discloses the portion of ratings data is automatically generated by the client system based on data stored on the client system that are indicative of content preferences.

Graves discloses the programs are selected with the highest interest to the viewer based on the viewer's personal preferences regarding program attributes using neural networks, which is a computer program operating on computer equipment (column 7, line 55-column 8, line 4), which meets the limitation on automatically generated by the client system based on stored data that indicate content preferences of the user. Graves discloses the neural network used to determine the program grade (column 8, lines 5-31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard in further view of Hendricks to have the neural networks generate the ratings as taught by Graves in order to place less of a burden on the user inputs and facilitate user viewing.

Regarding claim 11, as disclosed in claim 1 rejection, Wu discloses the programs in the scheduled are scheduled based on the rankings of demand from the user.

Neither Wu, Rao, Girard, nor Hendricks discloses portions comprising ratings provided by users and the other portion automatically generated by the client system based on stored data. Graves discloses the viewer enters program preferences regarding programs and program attributes and has three modes of entering personal preferences for each program (column 6, line 53-column 7, line 20, figures 5, 6). Graves discloses the process acquires viewer personal preference in the personal preference file 32a (column 7, lines 37-43), which meets the limitation on a first portion of ratings provided by a user.

Graves discloses the programs are selected with the highest interest to the viewer based on the viewer's personal preferences regarding program attributes using neural networks, which is a computer program operating on computer equipment (column 7, line 55-column 8, line 4). Graves discloses the neural network used to determine the program grade (column 8, lines 5-31). Graves discloses neural networks learn from experience and try to obtain a close grade by estimating a grade and comparing it with the viewer grade and adjusted until the grade of the neural network matches or closely approximates the grade generated by the viewer (column 9, lines 4-31), which meets the limitation on automatically generated by the clients system based on stored data that indicate content preferences of the user. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard in further view of Hendricks to have the ratings generated by the user and by the system as taught by Graves in order to give distribute some of the burden of the user generating ratings to the system but updating the user preferences enough so they will not become outdated.

Regarding claim 15, as disclosed in claim 1 rejection, Wu discloses the rankings of more than one program in the schedule queue based on user demand.

Neither Wu, Rao, Girard, nor Hendricks discloses the user ranking at least two pieces of content indicating the desirability of the content. Graves discloses the programs that are most significant to the user are stored (column 6, lines 32-49). Graves discloses the viewer enters program preferences regarding programs and program attributes and the user ranks programs (column 6, line 53-column 7, line 20, figures 5, 6). Graves discloses the process acquires viewer personal preference in the personal preference file 32a (column 7, lines 37-43), which meets the

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limitation on ranking at least two pieces of content wherein the ranking indicates a level of desirability of the content. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard in further view of Hendricks to have the user rank programs as taught by Graves in order to tailor the storage of programs more relevant to the user.

Regarding claim 16, as disclosed in claim 1 rejection, Wu discloses the programs are scheduled for transmitting the highest requested program first.

Neither Wu, Rao, Girard, nor Hendricks discloses the program rankings generated automatically by the clients system that indicate the content preferences of the user. Graves discloses the programs are selected with the highest interest to the viewer based on the viewer's personal preferences regarding program attributes using neural networks, which is a computer program operating on computer equipment (column 7, line 55-column 8, line 4). Graves discloses the neural network used to determine the program grade (column 8, lines 5-31). Graves discloses neural networks learn from experience and try to obtain a close grade by estimating a grade and comparing it with the viewer grade and adjusted until the grade of the neural network matches or closely approximates the grade generated by the viewer (column 9, lines 4-31), which meets the limitation on automatically generated by the clients system based on stored data that indicate content preferences of the user. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard in further view of Hendricks to have the ratings generated by the user and by the system as taught by Graves in order to give distribute some of the burden of the user

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generating ratings to the system but updating the user preferences enough so they will not become outdated.

Regarding claim 18, as disclosed in claim 1 rejection, Wu discloses the programs in the scheduled are scheduled based on the rankings of demand from the user. Wu discloses the data can be sent and received over data channel (page 5, lines 23-26), which meets the limitation on client feedback.

Neither Wu, Rao, Girard, nor Hendricks discloses portions comprising ratings provided by users and the other portion automatically generated by the client system based on stored data. Graves discloses the viewer enters program preferences regarding programs and program attributes and has three modes of entering personal preferences for each program (column 6, line 53-column 7, line 20, figures 5, 6). Graves discloses the process acquires viewer personal preference in the personal preference file 32a (column 7, lines 37-43), which meets the limitation on a first portion of ratings provided by a user.

Graves discloses the programs are selected with the highest interest to the viewer based on the viewer's personal preferences regarding program attributes using neural networks, which is a computer program operating on computer equipment (column 7, line 55-column 8, line 4). Graves discloses the neural network used to determine the program grade (column 8, lines 5-31). Graves discloses neural networks learn from experience and try to obtain a close grade by estimating a grade and comparing it with the viewer grade and adjusted until the grade of the neural network matches or closely approximates the grade generated by the viewer (column 9, lines 4-31), which meets the limitation on automatically generated by the clients system based on stored data that indicate content preferences of the user. It would have been obvious to one of

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ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard in further view of Hendricks to have the ratings generated by the user and by the system as taught by Graves in order to give distribute some of the burden of the user generating ratings to the system but updating the user preferences enough so they will not become outdated.

Regarding claim 19, Rao discloses the programming and the electronic program guide data (meta-data) is transmitted down to the user in a digital bit stream (column 9, lines 47-65), which meets the limitation on transmitting pieces of content considered for upcoming broadcast is broadcast as a continuous stream that is repeated. Rao discloses the user uses the programming guide and selects video programming (column 16, lines 3-16); the programming guide necessitates including names of programs, times, etc., which meets the limitation on content descriptor.

Wu discloses a ranked list of programs according to demand of the user (page 12, lines 19-32).

Hendricks discloses viewer demands and ratings are sent back to the CAP 316, which is part of the scheduler (column 10, lines 39-67).

Neither Wu, Rao, Girard, nor Hendricks discloses the client feedback data **includes** a ranked list expressing relative interest in each piece of the content. Graves discloses the user ranks the programs to set the personal preference file (column 6, line 53-column 7, line 20, figure 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard in further view of Hendricks to

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have the user rank pieces of content as taught by Graves in order for the user to have at least a portion of the decision as to what programs they receive.

Regarding claim 30, the limitations in claim 30 have been met in claim 11 rejection.

Regarding claim 33, the limitations in claim 33 have been met in claim 18 rejection.

Regarding claim 34, the limitations in claim 34 have been met in claim 19 rejection.

Regarding claim 39, the limitations in claim 39 have been met in claim 11 rejection.

Regarding claim 42, the limitations in claim 42 have been met in claim 18 rejection.

Regarding claim 43, the limitations in claim 43 have been met in claim 19 rejection.

Regarding claim 48, the limitations in claim 48 have been met in claim 30 rejection.

Regarding claim 51, the limitations in claim 51 have been met in claim 18 rejection.

Regarding claim 52, the limitations in claim 52 have been met in claim 19 rejection.

5. Claims 7, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Rao in further view of Girard in further view of Hendricks in further view of Graves.

Regarding claim 7, Hendricks discloses the ratings are fed back to the market research component where the CAP uses the information to determine a program lineup (column 10, lines 39-67).

Neither Wu, Rao, Girard, nor Hendricks discloses calculating an average rating and the highest rated piece of content is the highest average. Graves discloses the well-known neural network calculates a weighted summation (column 7, line 55-column 8, line 31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard in further view of Hendricks to calculate a weighted

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summation of programs as taught by Graves in order to select programs with the highest interest to a viewer.

As previously disclosed, Graves discloses calculating a weighted summation. Neither Wu, Rao, Girard, Hendricks, nor Graves discloses calculating an average. The examiner takes Official Notice that taking an average of a plurality of values that have been added together is notoriously well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard in further view of Hendricks in further view of Graves to calculate an average of a weighted summation in order to provide a mean value which reduces the influence of any outlying values thereby providing a more realistic assessment.

Regarding claim 14, Hendricks discloses the ratings are fed back to the market research component where the CAP uses the information to determine a program lineup (column 10, lines 39-67).

Neither Wu, Rao, Girard, nor Hendricks discloses calculating an average rating and the highest rated piece of content is the highest average. Graves discloses the well-known neural network calculates a weighted summation (column 7, line 55-column 8, line 31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard in further view of Hendricks to calculate a weighted summation of programs as taught by Graves in order to select programs with the highest interest to a viewer.

As previously disclosed, Graves discloses calculating a weighted summation. Neither Wu, Rao, Girard, Hendricks, nor Graves discloses calculating an average. The examiner takes

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Official Notice that taking an average of a plurality of values that have been added together is notoriously well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard in further view of Hendricks in further view of Graves to calculate an average of a weighted summation in order to provide a mean value which reduces the influence of any outlying values thereby providing a more realistic assessment.

6. Claims 54, 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Rao in further view of Girard.

Regarding claim 54, 56, Wu discloses the signal from the stream source 112 could be any type of connection and the data channel can be a coax cable, telephone return, or any other type of connection (page 4, lines 7-16).

Neither Wu, Rao, nor Girard discloses each being a bi-directional connection or a computer network. The examiner takes Official Notice that a bi-directional connection or computer networks are notoriously well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard to have the connections be bi-directional in order to promote more user interaction.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wu in view of Rao in further view of Girard to have each of the connections be a computer network or any other type of connection in order to provide more system versatility.

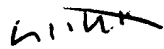
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason J. Chung whose telephone number is (703) 305-7362. The examiner can normally be reached on M-F, 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew I. Faile can be reached on (703) 305-4380. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

JJC


VICTOR R. KOSTAK
PRIMARY EXAMINER